

GREENBERG

BELIZE

1984

7530-00-222-3521

FEDERAL SUPPLY SERVICE

(GPO)

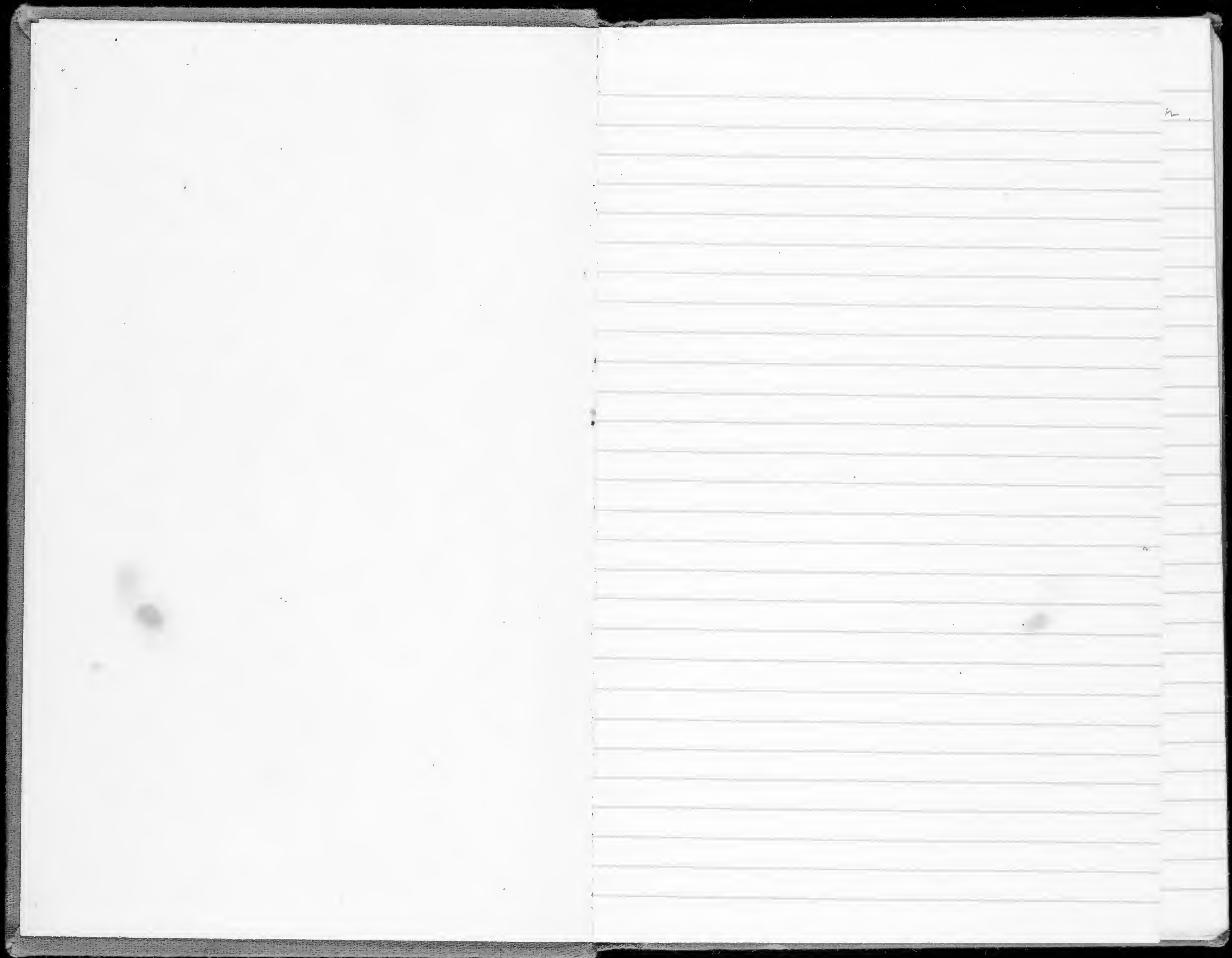
Russell Greenberg

Dept. of Zoological Research

National Zoo

Washington, D.C.

2008



February 11.

I arrived at Dona Weyer's place at 10:00 a.m. after getting settled I headed towards the Shibun River which lies $2\frac{1}{2}$ miles E. The habitat around her house is "Poa leucomela" sparse pine with grassland & areas of dense scrub around water. Apparently the Shibun River has a gallery forest of low herbaceous & across the river are limestone hills (small) covered with forest.

The weather was dreary - & the word is that it has rained a lot the "dry season" - I saw ~~Black~~ Yellow-billed Cuckoo, Tropical Mockingbird - but Yellowthroat I did not see I think also. The trail I took led to a Orange Grove & then descended a swamp.

I went to mile 31 on the Western Highway & took a road E to the Shibun River. It ended in a Swamp & I looked along the river through a recently disturbed Riparian forest.

Cattle are being sold & most
 of the remaining spruce forest has
 had its undergrowth removed. Still, I ^{at camp}
 saw quite a few birds: Ant. Tanager, ^{at camp}
 R. Fox ~~the~~ ^{at camp} Sparrows (1.4) & ^{at camp}
 common - very warm - the - rattling Ant-bird
 around some vine-branches. 1 Yellow-billed
 cuckoo: ~~seen~~ 10+ American Goldfinches &
 6-7 Myiobatrachids + 2 ovenbirds
 Camped at the migration

I checked a final road mile 33
 I went to look for which creek crossed the
 road that had a dense spruce forest with
 heavy soil - At 3:00 - 2:00 PM
 was quite dark & I saw little. - I had
 a White-throat & saw 1-2 Redstarts
 De-list:

Little Blue Heron

Little Egret

Tuckey Vulture

W. T. K. L.

Crane Hawk

Plum. checkered

B. B. B. B.

S. S. S. S.

J. K. K. K.

G. K. K. K.

? woodpecker

Only 4 at camp
 B. Ant-bird
 B. Ant-bird

Brown Jay

B. B. B. B.

B. W. W. W. (2)

M. W. W. W. 8

Yellowthroat 6+

Redstart 10-15

B. B. Tanager 4

T. W. T. W. 2

W. W. W. W.

~~D. W. W. W.~~ 40

February 12 - Belize

7:30-4:00 I spent in forest on
the first 5 miles of the hummingbird biology
I took several trails into the
woods. The day started out breezy-
overcast - it warmed to 60 minutes
about noon - mid-day was lovely &
the afternoon was lovely.

~ Mile 3 I hiked N into
woods on what looked like an old
logging road - other trails were cut &
it might have been the nesting site
for Minors. The forest was lower
dense & heavily dominated by palms
I saw ~~several~~ 3 Ant tanager
flocks & 3 Red-wormers - 1
My blue - I couldn't follow it long.
I got data on all 3 worms -
even in Tanager flocks. They are
very skittish & drop down or
burst & fly away. Other members
of Ant tanager flocks include:
T. L. Greenlet (in 2 flocks), B-L Warbler
(all 4 flocks), Hooded Warbler ♂
Redstarts, W. B. Woodcreeper
S. H. Woodcreeper, T. L. Manakin
M. Warbler

Bentbill, W. B. Woodcreeper
Alouatta in this forest.

Y-O. Flycatcher

Monk's Vireo

L. B. Woodcreeper (hd)

Brown Antbird (hd)

Dark Antbird (hd)

Went's Warbler (several hd)

The next trail went from Mile 4 to 5
South up a path between two
limestone hills. I saw 2
Ant tanager flocks - 1 had a wormer.
It also had a CSW immature,
47 vireo, B-L Warbler, T. L. Greenlet,
T. W. Woodcreeper woodcreeper
On this trail I saw 2 Ocellated
Turkeys, 2 Green Jays, a Little Heron &
Lark & several more Went's Warblers
1 ♂ Hooded Warbler.

The final one was 6 miles - I
backtracked through a dense path
forest to the top of a limestone
hill. Here the forest was

most mature - 60' E open hollow
(most of the rest has been 2nd
& 3rd)

I ~~have~~ found two flocks - in one 2
hd hummers & the 2nd I
brilliantly blue & white. 7 also
S. W. woodpecker B F
Ant thrush

Day list

C. egret

Roadside Hawk

Kestrel

Ocellated Turkey 2

Parula

W. C. Swift 6

L. Hermit 4 (1 hd)

V. Trogon 1

T. W. woodpecker 6

W. B. woodpecker 2 (1 hd)

Brown woodpecker 1

S. H. woodpecker 2 (1 hd)

R. B. sparrow 1

Pl. X. 1

B. Ant. 3

D. Ant. 1

Ant. Ant. (hd) ? 1 group

B. F. Ant. 1

R. Ant. 1

W. C. Mocking 10

Thrush & Mocking 2

M. T. 1

~~V. T. Flycatcher~~

F. T. Flycatcher

B. B. Flycatcher 1 hd

Small Flycatcher

O. L. Flycatcher 2 hd

L. B. Ant. Flycatcher 6

L. T. Flycatcher 3 hd

L. T. Sparrow 2 prs

L. O. L. Flycatcher 1

M. B. 8

T. B. T. 1 hd?

G. B. Martin

Brown Jay

Green Jay 2

W. B. Woodpecker 20

Gray L. bird 2

Wood Thrush 2

L. B. C. ? 1 hd

| | |
|-----------------------|-------------|
| W Eucro | 1 |
| Y.T. Vireo | 1 |
| T.C. Gnatcatcher | 8 |
| Lesser Greenlet | 12 |
| Beardless Tyrannulet | 2 |
| B.L. Warbler | 6 |
| Worm-eating Warbler | 6 |
| BT Green Warbler | 2 (♂ + ♀) |
| C.S. Warbler | 1 |
| O. Antbird | |
| M. Antbird | 5 |
| N. Antbird | |
| Venturing Warbler | 10 |
| Hooded Warbler | 3 (♂) |
| Redstarts | 8 |
| M. Oropendola | 2 |
| Grackle | |
| Blue Antbird | 1 ♀ |
| R.C. Antbird | 3 (♂ group) |
| R + Antbird | |
| B. Flycatcher | 4 |
| Green-backed sparrow | 4 |
| B. Flycatcher | 4 |

Foliage mist survey

- 15 min on 10 min intervals
 2.1 min to finish 40' - dense
 understory

90

20

40

10

3 min 10

50

50

4 min 10 + 10 min 10

40

50

30

50

3 min 10 + 10 min 10

50

80

50

50

50 1.5m Wet, 1st (gr) 14
5mm or 10mm 1b

50 4mm 1st (gr) 14

50

50

100 4mm 1st (gr) 14

50

50

50

50 3mm 1st (gr) 14

50

100

50

50

50

50 3mm 1st (gr) 14

50

50 2cm 1st (gr) 14

50 - 1st (gr) 14

50

100

50

50

50

50

50

100

50

50

50

50

50

100

2mm 1st (gr) 14

11
2192

February 13 Hummingbird study
Belie

8:00 - 4:00

I worked further out the
hiking today - beginning ~~to~~ beginning
Branch 13 miles out.

Beyond this settlement is a
dense area of Coconut plantation
& also dense 2nd growth forest.

I began working in some very
dense 2nd growth - I saw only
Antbirds, a large group of Antbirds
(+ P. virens) - but the going was
too rough. so I climbed a hill
with more open forest across the
hiking. The first flock

I saw was led by Ant tanager, Coconut
Y. B. (tanager), S. B. wren, P. A. W.
wood wren, M. warbler, 'A'
a W. E. W. (just down). P. A. bird

I continued along hill -
saw BP between two Ant tanager groups
(One I just saw), P.

I then saw a large mix -
Ant tanager, P. C. Gnatcatcher, Spot-billed
Wren, P. A. W. W., 2nd-billed
Woodcreeper, Dark Antbird O. B. Gnatcatcher
M. W., Redstart, Blue warbler -
a lot more W. E. W. P. A. W. pr
Q Bentbill, Sp. bill

I proceeded up road 2-2 m. W.
& entered some local forest

- very poling undergrowth &
undergrowth like to looking at
first hill. I saw on a flock

a 17 was in Prase vine trees -
Ant tanager, T. C. Gnatcatcher, P. Antbird,
Shrike-tanager & W. E. W., Redstart
S. B. wren, Yellow warbler, Coconut
S. B. wren, P. Antbird.

I crossed the foliage on the
way to river

I went 1 m. further &
descended in a river &
mountain ridge - I saw Antbird

a T. L. Warbler pc with
 A-W, Manakin, Redstart & Wood Thrush
 others (P) but I couldn't
 follow it to be sure & it
 didn't have a warbler - later

I saw a Ant-tanager group with
 a Lamer Tanager (hd), Greenish-
 & Redstart - but no warbler.

I went back to a trail on
 Mule T which contains small
 hills - I saw a Black 40' in
 a very dense vine forest with
 Greenery, WEW, & B. Wren

& Ant-tanager in a few trees over -
 I got brownish of dots on
 this very dark warbler as it
 was most unskiddish compared
 to others I've seen here.

Diglossini
 Great Tanager (hd)
 T. Warbler
 Redstart Hawk
 W. T. W.
 M. Parrot
 Sp. Redstart
 Ant-t.
 T. W. Warbler 1
 Lamer Warbler 1?
 I. B. Warbler 6
 W. B. W. 2
 Plain King 1
 Dark Anthr 4
 P. A. W. 2 pc
 B. T. B. 3-4
 B. T. B. B. T. B.
 L. B. B. T. B.
 O. B. B. T. B.
 Brown J.
 Sp. - B. T. B.
 G. C. T. B.
 Tropical Maybird
 L. B. B. T. B.
 Green Str. W. B. W.
 T. L. Warbler
 L. Green 1 & 4

WEW 4
 Manakin 4
 BTG 1 hd
 O. B. W. 4
 V. T. W. 8
 Hooded Warbler 8-10
 (28+1)
 ♀ seen
 ♀ W. W.
 dull
 Mel. W. B. T. B.
 O. B. Eph. 2
 Lamer Tanager
 O. B. Sparrows

Feb. 14

Flock 1
281 Ant-tiger
PX
? - 100 - 100
100 - 100 - 100

H. 100 100

W. 100 100

B. 100 100

R. 100 100

M. 100 100

S. 1 Flock 1
281 Ant-tiger
PX
T. 100 100
I. 100 100
S. 100 100
W. 100 100
P. 100 100
Sp. 100 100
B. 100 100
W. 100 100
M. 100 100
B. 100 100

February 14 - Hummingbird House -

I was very bad. I was tired
 & I forgot to write field notes
 for this part of day & I
 only vaguely remember what
 I did - Check plots at the
 field - Important! 3 more ♂ Humblers
 in flower + 1 ♀

Common and
 south

Blue - common
 & slightly in other

Chimney woodpecker!

~~Not~~ Only in winter.

Colletes Blue bees

Day list (March 20th)

Violaceous Tanager 1

Arrears

C. C. Woodpecker

T. L. Woodpecker 1

Chimney Woodpecker 2

LBW

L. B. Woodpecker 8

Py

P. A. W. 3-4 pr

P. Antbird 2

D. Fly

Empidonax sp

Sp. B. 11 2

N. B. 11 4

B. Jay

S. B. Wren 6+ pr

W. B. Woodpecker 6 pr

C. B. 1

G. J. 1

T. C. Great 4 pr

L. Great 1 common

M. W. 8

B. H. W. 2

B. M. C. W. 1

K. W. 5

H. W. 8

Y. W. 2

L. E. W. 1

H. W. 1

~~W. B. Woodpecker~~

Feb 15

Flock #1
 2 Ant-tan
 R.C. Ant-tan
 B.T. Flycatcher
 Reddy Woodpecker
 Y.B. Tanager
 P.X.
 Babbler

Flock #2
 2 Ant-tan
 D.W.W.
 P.X.
 W.B.W.
 T.B. Woodpecker
 S.R. Flycatcher
 M. Woodpecker
 W.B. Woodpecker

Flock #3
 2 Ant-tan
 P.X.

Flock #4
 2 Ant-tan
 Y.B. Tanager
 S.B.W.
 T.C. Woodpecker
 P.W.W.

Hummingbird Highway

830 - 445

I first went way out the highway to Mile 17 or so & bushwhacked up a small Kant valley up a very scrubby ridge top - the valley floor had relatively open forest. I felt awful all day - it was overcast & rained a bit in the morning but cleared up by noon.

The birds I saw are in the previous page - I need to say - I saw no warblers in them - or at all today.

I went further out the road to (Lushes) Cacao plantation & beyond, but mostly it is cleared near the road - I returned to make it easy to do. I don't know.

I saw Flock #4, as well.

I got more observations on Spotted-bellied woodpecker - they are very much like (T.A.W.).

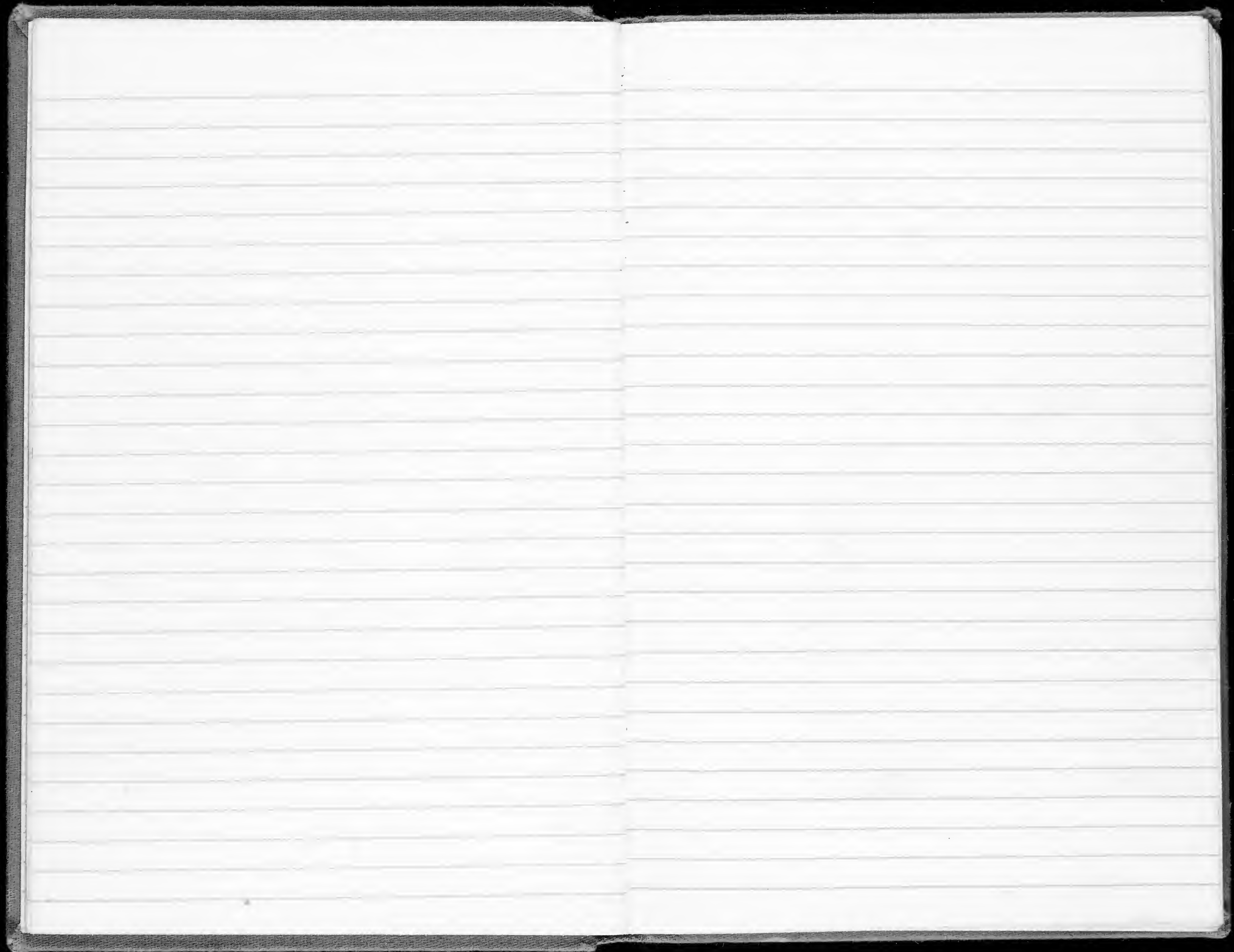
I went up a 2nd growth track
 (old jeep trail? - old highway)
 for 1-2 mi - saw little bit
 was hot 2-400pm - but I
 saw a pair of Juncos
 & an Atilla with a huge fly
 party - Frigate was 1st x
 head length of atilla & Red

Atilla was a bit. Also Citoline
 Tanager lots of C. ...
 Hummer 1 A. of ...
 2 ...

I stopped at final spot
 at Mile 3 on right - a track
 that ended quickly in a ...
 I saw 20 ...
 Ant ... group ...
 A-t ... T. ... I.B. ...
 ...

Day list:

| | | |
|-------------|-----|----------------|
| W.C. Parrot | | |
| S. ... | 2 | |
| Am ... | | 6 ... |
| C. Trogon | 1 | LB ... |
| S. T. ... | 1 | G. ... |
| R. T. ... | | W. ... |
| R. ... | 1 | T. ... |
| T. ... | 1 | L. ... |
| W. ... | 2 | S. ... |
| I. ... | 4 | MW |
| B. ... | 2 | BT6 |
| Pf | 2 | ... |
| B. ... | 2 | KW |
| D. ... | 1 | HW |
| D. ... | 3 | C. ... |
| BR Atilla | 1 | (sub) |
| BB ... | hd | Y. ... |
| D. ... | hd | B. ... |
| E. ... | 3-4 | Y. ... |
| S. ... | 1 | R. ... |
| N. ... | 2 | R. ... |
| B. ... | | G. ... |
| Green Jay | 3 | |
| S. B. ... | 6 | |
| L. B. ... | 4 | |



2/16/17 Hamburg, NY

Handwritten notes:

70
60
50
Sample
40
30
20
10
0

Time yr, x/b

80
70
60
50
40
30
20
10
0

8/8

Feb 16

Flock #1

PAW

PK

RIAT

Least Antbird

TC Green

S B Wren

L Greenlet

I B Woodwren

WBW

Flock #2

Tree Antbird

Y Bluebird

Pink Warbler

I B Woodwren

SD Wren

OW

MDW

WEW

Flock #3

2 Antbirds

sp. 11

I B Woodwren

SPW

WEW

Flock #4 RTAT

House Wren

Woodwren

I B Woodwren

Flock #5

2 Antbirds

PAW

I B Woodwren

S B Wren

IBW

P. Antbird

Blue-winged Warbler

Bluebird

(Hooded?)

MDW

February 16

I worked the early part of the Hummingbird Highway.

I saw 3 + had a 4th was - all in mixed species flocks.

I got good data on the 3

The previous pile has the composition of 5 well

covered mixed flocks - I

saw a very pale blue

long-billed woodhewer +

they appear to do a lot of Palm lot foraging.

Darker TC Greenlet, + S B Wren

on also had regulars.

The last two flocks were in the

mile 3 area - where I went

the first day - but I found

flocks - the birds were well in

young 2nd growth near the road

Day list -

W.C. Parrot ?

Little Heron

R. Tanager

C. troglodytes 2

Tw. woodpecker 1

Rus. of woodpecker 1 (continued)

2 B woodpecker 3-10

W.B.W. 1 pr

B. Antbird 2 pr

Rus. Antbird 1

D. A.W. 1 pr

D. A.W. 2 pr

W.C. M. 1 pr

M. T. 1 pr

B. O. 1 pr

D. P. 1 pr

E. P. 1 pr

B. B. 2-3

S. B. 2-3

B. B. 1 pr

C. B. 1 pr

W.B.W. 1 pr

White bellbird 1 pr

Gray bellbird 1 pr

W.B.W. 1 pr

T. B. 1 pr

L. B. 1 pr

T. L. 1 pr

L. B. 1 pr

B. B. 3

D. L. 1 pr

W.E.W. 4

M. B. 10-15

K. W. 6-8

H. W. 4 more 5 + 10

in forest in 5/16

+ 4 hd

50
50
50
50
50
50
50
50
50
50
100

3mm spec 1b

50
50
50
50
50
50
50
50
50

100

50
50
50
50
50
50
50

4mm spec 1b

50 1m George Langford buth
(4mm spec 1b)
(3mm " " 1b)

50

50 3mm spec 1b

7/0

Feb 17

Check Mile 3 area at Hummer

1230-1330

Saw the following species:

RTAT

RTAT

TE Greenlet

EDW

WB Woodpecker

W. Wren Warbler

WEW

{ RTAT

{ Hummer 4

~~RTAT~~

And in addition:

T. W. Woodpecker

B. W. Woodpecker

CH Tanager

G. bird

RTA Tanager

T. W. Woodpecker

I stayed in grassy sand scrub with
V2 - 1/2 of road.

I also did insect census

No red plant in only a day list

Feb 18 Belize

I drove down the Southern Highway - which is a dirt track through Pine forest most of the way. I went to Peter Gordo to find (chick) Wright so he could send me to forest around San Antonio. He suggests that first I go to Blue Creek which is 8 m. up a turnoff from the road to San Antonio. The creek around B. creek has some scrubby forest & lower timber has been left along the creek. I poked around some end growth near the village that was heavily infested with pig tracks (I even saw 2 pigs) - I saw little - one Anttiger - 7 C. breasted flock with 1 B. woodcreeper & B. H. Sittler, Redstart, warbler, M. Warbler in area. Lots of G. B. sparrows

I walked up Blue Creek a ways & through the forest way

beautiful along the river - I
saw few birds (C. L. breasted) 7 L. L.
a few K. Woodhoop & Redstart

Feb 19 San Antonio

- Terrible
- conditions
- rain &
- overcast



taken in morning

Flock 1: 27 Anttanager
RC Anttanager
TC Greenlet
Sepia capped flycatcher
TB Woodhewer 6 hours at Dillat
(A vine)

Y Bricque
Brown wbler
W B woodwren
WRW

Flock 2 RC Anttanager
W B woodwren
WBW

Abo ~~note~~ 3-4 kW

1 Hooded

1 MW

2-3 Redstarts

10 warblers

Today I took the ~~trail~~ road to
San Jose in search for forest.
The road winds through thickly
settled country for several miles
to a military base just the same
first from the old road at
the road with a thick detail for
a mile or so (at 6000 above
note). It was very overcast.

I continued on the road
for my miles & while I could
see forest in the distance
the road never got close.

I found a track that headed
west? towards Union I was told.
I hike for over an hr towards
forested hills but it didn't look
like the road got particularly
close to forest. 3 saw
Acorn Woodpeckers, BH Sittlers,
T.B. seed finch, W.C. seeders,
Indigo Buntings (many), 2. Tanager, (2)
Yellowthroats, MW (6-8 in scrubby veg),
KW (1), Empidonax, Yellow Warbler
Redstart (several)

I returned to area beyond the
Military camp & from 1200-400 I
worked up a trail towards NE.
I skirted woodlands 1/2 m. then turned
abruptly into forest. Practically
the first bird I saw was
a L. Greenlet. I saw 2 more on
the hike. By now the
sky was clearing.
The trail starts out as a road
& narrows - it goes through
undisturbed forest. I think

except that it is along a
ridge & has numerous blowdowns.

Flies AT

R. Greenlet
L. Greenlet
IBW
E. R. Puffin
G. W. Warbler
L. W.
Redstart
H. Warbler
B. W. Warbler
L. W.
O. B. Sittler
P. Y.

Beginning of trail is
very steep
then it
flattens out
with a road
other mountains
in the distance

WE estimate Choptape area to be
6' 40" high on a lot 500 x
hold on to 4" PCH

~~3' 40"~~
5' 40"

then 3' 10" on grass but dead
Palm trees (2-3)
no ushers,
F. P. P. let pink & purple other
fruits
I picked the vine

(another bird on tape)

Feb 20

Block 1 Ant lark
T. larklet
LBV
P1

SB Woodpecker BT Woodpecker
SR Flycatcher W. Woodpecker
LEW
GC W. Woodpecker
R. lark
ML
KW

5

D. W. W.
P. larklet
Ant lark
BTFB
W. Woodpecker
LEW (LH)
C. Woodpecker

Block 2 {S. W. W. small
GC W. Woodpecker
T. W. Woodpecker}

7-1120
W. Woodpecker
KW = 5
HW = 3 (B)

9

RCAT
T. larklet
B. larklet
L. larklet
W. Woodpecker
S. larklet
RTB

Block 3 G. Woodpecker
B. W. W.
T. W. W.
M. W.
W. W.

R. larklet = 8
M. W. = 4
B. W. = 4
D. larklet = 3
W. W. = 4
T. W. W. = 1
C. W. W. = 1

Block 4 Ant lark
T. W. Woodpecker
W. W. W.
W. W. W.
T. larklet

Sup. larklet
SR Flycatcher
HW 5

10

W. W. W.
L. W. W.

Live Police February 20

Trail up Mtn from Rd
to San Jose - Forest

Sunny + Warm

50 small (from Fragm. spider)

50

50

50

3mm spider

4mm spider

50

3mm spider

4mm " "

50

50

50

50

50

50

50

60

50

50 in tree bark

50

50

50 1mm spider

50

4mm spider

50

50

50

50

50

50

50

50

50

4mm spider

1300

300

Small moth (1-2)

50
50
50
50
50
50
50
50

2000

50
50
50
50
50
50
50

5mm sp. 1b

3mm hump hump 1b

50
50
50
50
50
50
50

50

50

50 (5mm sp. 1b)

50 (2mm hump 1b)

50 (5mm hump hump 1b)

50

50

50

50

50 (2cm - Spring caterpillar?)

3000

50
50

50 (6mm hump 1b)

50

50

50

3300

50
50
50
50
50

50 4mm girth

50
50
50
50

5mm girth

50
50
50
50
50

5mm girth

50
50
50
50
50
50
50
50

50
50

50 5mm hanging 16

50 3mm hanging 16

50

50
4300

50

50

50

50

50

50

50

50

50

4700

50

50

50

50

50

50

50

50

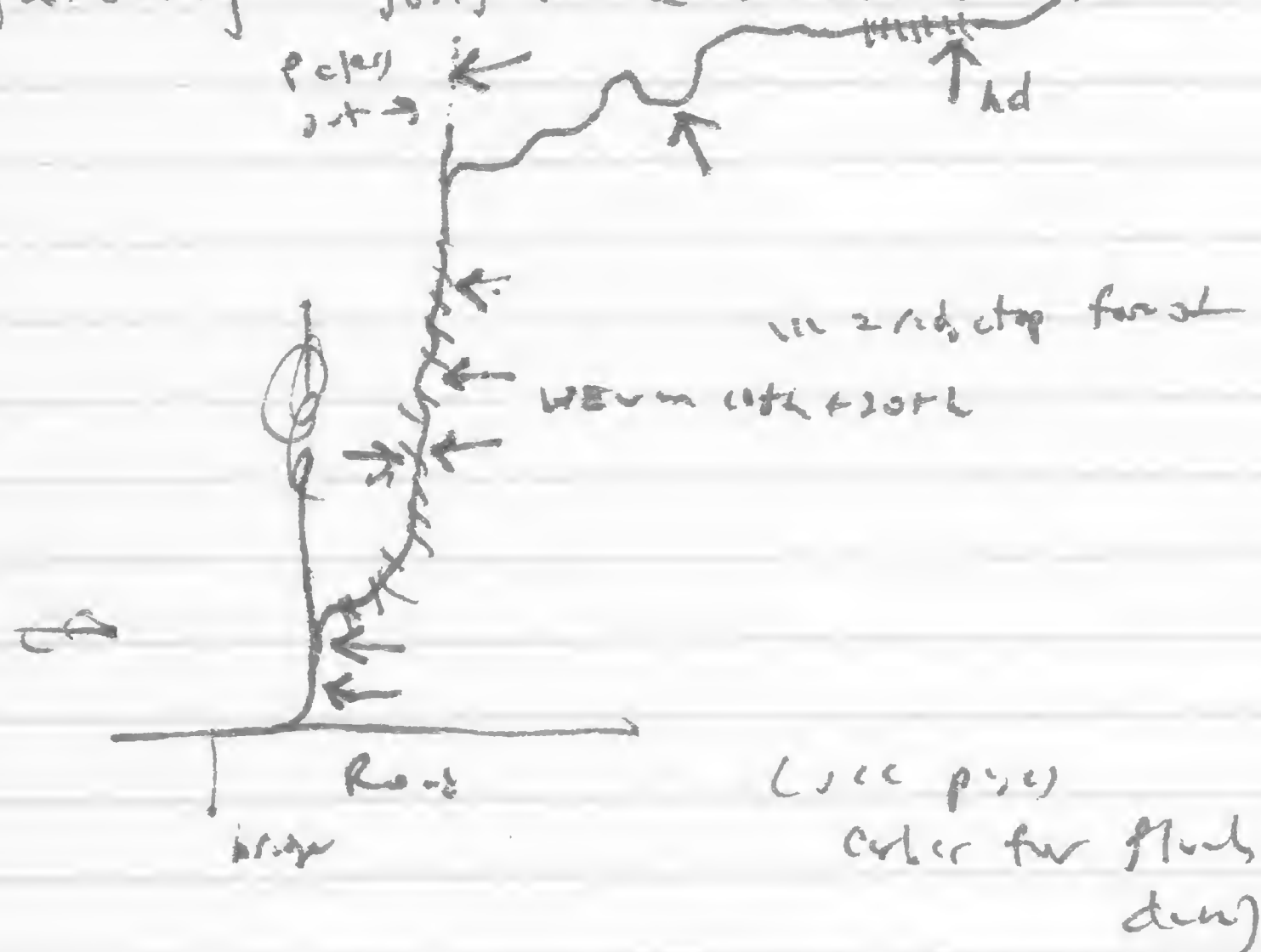
1.7cm Hetsie 16

= 22/4

745-430

February 20 San Antonio Belize

I worked out some trail as yesterday - going much further



The trail descended from the ridge top into beautiful mature forest with patches of hanging palms? understory. There is a surface stream.

The ridge top forest has lots of PHAW, oriole, Antbirds, TC Greenlet with a few pos of G.C. warblers Ruby Antbirds -

Common migrants include KW, HW B&W + Redstart LFW MW

with some BTB (2), Wilson's (1), Robin bird (3-4)

ON but 2 of the birds were clearly in nest + one was with BTB warbler + the one at trail long way near some other migrants but not filling any flock

Since we've seen fairly common I am getting inside data (see p. 10 process for last census).

Trail Apparently goes to Esperanza + is used heavily by hunters from San Antonio

Combined List

2/11 - 2/20

W/Heck (hd)

Phoebe chickadee hd.

G. h. Dove 1

R. Qu. Y. Dove 2

S. B. P. (hd)

W. C. P. 6

S. C. 3-4

L. T. Hermit 1

L. T. Hermit "

W. B. Emerald 3-4

P. C. Fairy 1

R. T. Humbird 6 Many

S. T. Trogon 1

B. C. Motmot 2

R. T. Tanager 2

W. P. L. P. bird 1

W. B. Tanager 10

B. C. Woodpecker 1

T. W. Woodcreeper 6

W. B. W. 6

B. Red Woodcreeper 3-4

I. B. W. 10

B. Red Antbird

Y. B. 2-3

D. W. A. W.

8-10 pr

G. Sh. W. 6

P. G. Antbird

10

Y. T. Vireo

R. C. Manakin

10

T. C. Greenlet

W. C. Manakin

10

L. Greenlet

Th. Sh. L. Manakin

3

B. Manakin

B. R. Attila

6+

B. Sh. L. 10

R. Manakin

2

W. E. W. 10

C. B. C. 1

G. W. W. 1

M. T. T. 1

T. W. 1

G. W. W. 2

Y. W. 2

G. C. Flycatcher

2

M. W. 20

D. C. Flycatcher

B. T. 6 1

E. P. 1

C. W. 5

W. T. P. 1

4

W. T. P. 1

G. R. P. 1

3

K. W. 1

N. B. P. 1

6

C. Y. P. 1 (3000)

R. T. F.

3

W. W. 3

O. B. P. 1

5

A. R. 20

L. W. P. 2

G. C. W. 6

B. J. 1

M. R. 1

B. B. W. 1

4

B. T. 1

G. B. W. 1

3

B. C. 2

W. B. W. 1

8-10 pr

O. B. E. 1

G. C. B. 1

2

S. R. 5

T. B. 1

6

B. T. 1

W. B. W. 1

3-4

W B z p r o w

on flycatcher

Flock 5
TC Green
P-AW
W-EW
IB Wood
Px
SR Flycatcher

Flock 6
P-AW
LB Greenlet
AW S.C. Flyc
BTB S.R. Flyc.
LB Greenlet pr

Flock 7
P-AW (ally to nest group)
LB Greenlet
CW (this one - p all 4-5
other fine hen 30-40'
p low up - 5-7'
leaf trees
winter mud base
branches, leaf to nest
sustained on BUT

BTB warbler
TC Greenlet Ld

88 D-AV
Greenlet
S.R. Flyc.
RTA Flyc
TC Greenlet
W-BW

79
P-AW
LB Greenlet
TC Greenlet
B-L Warbler
S. B. Warbler
S. B. Greenlet
Px

970
P-AW
LB Greenlet
TC Greenlet
RTA
B-W (2')
Px
S. B. Flyc.
SR Flycatcher
SB Warbler

Feb 21

730-430

I worked up the same trail
to Esplanade - but I walked
back on first part & worked study
on a vent further in lowland areas.
I saw orld YW. I
must say I was sick today (otomach
(comp) & from 200-430 I
collected dead leaves. Pluck composition
on previous page. The total
day list is as follows:

Slaty-breasted Tanager - a 1. per!

Great Black Hawk ← Little Egret

Aztec Parakeet

W. C. Parrot

W. B. Emerald

P. C. Fairy

R. T. Hum

LT Hermit

L. + the Hermit

S. + Trigon

K. B. Towhee

C. Acacia

Smoky-brown Woodpecker

The Woodpecker

Ruddy Woodcreeper

WBW

Bored Woodcreeper

LB Woodcreeper

Plain Xenops

S. T. Leafhopper

B. Antelope

R. + Antelope

Pl. + Antelope

Dot-winged Antelope

D. Antelope

B. Featherhutch

R. M. M. M.

W. C. M. M.

T. L. M. M.

B. R. Atilla

M. T. yra

D. y. + y. flycatcher

RTF

S. R. flycatcher

W. T. b. 11

E. R. T. bill

N. B. T. bill

G. R. E. E. E.

Y. B. T. T. T.

~~S. R. flycatcher~~

O. B. flycatcher

B. Jay

B. b. wren

S. B. wren

W. B. Woodwren

G. T. T. T.

Backwren

Green whistler

T. C. Greater

L. Wren

B. W. W. W.

W. E. W.

Blue winged W. W.

Pennine W. W.

Yellow W. W.

M. W.

B. T. G.

C. W.

W. W. T. T.

O. W. T.

A. W. T.

Y. B. Chat

A. Rabbit

G. C. W. T.

C. h. W. T.

Giant W. T.

R. T. Antelope

Sample 2 - Forest ^{low}

- Thin weed?
- 2cm rock
- Thin beetle
- 3m weed
- 2cm silver fish
- Thin rock
- 2cm katydid
- 1.8cm rock
- 1cm katydid
- 1.5cm katydid
- Thin katydid
- 6mm screw driver
- 2.5cm katydid
- 2.5cm katydid
- 3m spider
- 1.2cm katydid
- 2cm katydid
- 2.5cm katydid
- 4m rock
- 6mm rock

8 8 5 6 3 5 12
 5 1cm 6 7 8 5 7
 8 5 8 8 6 4 8
 5 4 5 8 8 5 12
 2cm spider 6 6 5 5 3
 3 5 7

18/13

Low Forest

- Thin rock
- 6mm orange beetle
- 1.2cm fat grasshopper
- 3mm spider
- 1cm weed (bush)
- 2cm beetle
- 6mm cricket
- 1.2cm rock
- 1.2cm silver fish
- 1cm striped beetle
- 5mm rock
- 2cm yellow caterpillar
- Thin rock
- 3mm rock
- 4mm weed
- 1.2cm katydid
- 8mm th. - Electric
- 7cm katydid
- 3cm katydid
- 3m rock
- 4mm katydid
- Thin weed
- 6mm orange beetle
- 3mm rock
- Thin ant beetle
- 5m weed
- 3mm rock

6 6 8 5 6
 5 5 8 6 4
 4 4 10 10 8
 6 6 8 5 6
 5 5 8 5 8
 8 5 8 5 8

18/7

RL Ant tenger
B. + shok-tenger
B. k salt
B. f Grahuk

Sample 4
Rice Puss, but escaped due to hole

| | |
|---|----|
| 8 | 3 |
| 6 | 3 |
| 7 | 2 |
| 7 | 4 |
| 7 | 12 |
| 6 | 8 |
| 9 | 4 |
| 7 | 8 |
| 6 | 6 |
| 8 | 6 |
| 8 | 6 |
| e | o |
| r | |

6mm rock
2mm rock
6mm moth
7mm rock
2mm Keith's
3mm rock
3mm spider
8mm spider
~~7mm spider~~
1cm wasps
" " "
4mm spider Keith's
1cm green beetle
3mm rock
2mm rock
1cm moth caterpillar
6mm spider
4mm rock
7mm spider
4mm spider
7mm wasp
2mm rock
2mm rock

17/6

Esperanza -
 Sample 5
 ridge top possible loss

3m sp. cr
 1.5m ketched
 6m new hoppers
 1.5m ketched (fat)

1.2cm rock
 1.5cm rock

3cm black Pedatatum ed with
 red spots!

1.2cm rock

6mm rock

1.5cm crickets

8mm ketched

5mm rock

1cm round black beetle

1mm rock

1mm rock

Big black beetle 2.5cm

5mm north

1.2cm rock

4

4

3

2

3

3

3

6mm sp. cr

5mm rock

1cm large
 beetle

10

10

96

4

4

3

3

6

3

8

6

8

6

6

15

15

10

10

96

4

4

3

3

6

3

8

6

8

6

6

15

15

File 23

102

527

Hummingbird Hwy
Blue Hole Area
Inlet areas

Handwritten notes:

80
80
80
80
80
80
80

80
80
80
80
80
80
80

Chapman

from b. wise bright

4mm Spur 16

Sum y. 31 1891

[illegible]

2-10-1

Donor

Colchic acid several times

Frangula

| | | |
|----|----|-----|
| 8 | 3 | 3 |
| 10 | 4 | 3 |
| 6 | 4 | 4 |
| 12 | 3 | 4 |
| 12 | 3 | 0 |
| 12 | 4 | 100 |
| 4 | 4 | |
| 8 | 2 | |
| 6 | 6 | |
| 6 | 8 | |
| 8 | 4 | |
| 6 | 4 | |
| 4 | 4 | |
| 8 | 10 | 100 |
| 6 | 8 | |
| 6 | 8 | |
| 20 | 3 | |
| 8 | 3 | |
| 8 | 3 | |
| 4 | 2 | |
| 12 | 4 | |

4 cm atripallo
 6 mm spider
 4 mm spider
 5 mm spider
 6 mm rock
 4 mm moth
 2 mm rock
 3 mm beetle
 3 mm spider
 3 mm spider
 9/4
 Delet. Cammillo, pule

I worked the Blue Isle
Region of the Hummingbird
Highway. I did my first
insect crosses & checked about
5 Antagon flocks - of which
2 had WEW. on which I
got data.

February 24

I returned once again to the Hummer Highway - where I spent only a few hours. In general it was a gloriously clear day - ideal for one final day's field work. I saw or heard 5 warblers today - on two locations. A trail ~ 5 mi up Rd. to the "Frontier" trail about 5 miles up Rd.

The first two were having an aggressive interaction which was mediated by an intense version of the "look chips" - I saw gaping & chasing as well. I got foraging data on one of the birds (both were in a Ant-tanager flock).

I saw a 3rd alone in palm forest (KW were around)

I had another in another section of palm forest.

Along the 2nd trail I saw WEL # 5 in Ant-tanager flock - I got data on it # 28 for Belize. - I quit & took afternoon off

Bird List 23 + 24th.

Great Tanager by
Gray Hawk
T. Vulture

R. Quail Dove
Whippoorwill
Yel. W. Parrot
Parakeet

R.T. Hummer
LT Hummer

Little Hummer

G.B. Mango

W.C. Swift

KB Tanager

Acacia Woodpecker

Th Woodpecker

Oliver's Woodpecker

WBW

LBW

Px

DWAW

Wc Mockin

Cinnamon Becard Blue Hole

V. Flycatcher

F.T. Flycatcher

TK

Scrub Wren } Roadside

G. Wren

Y. B. Flycatcher

W. T. Sparrow

~~W. T. Sparrow~~

Y. B. Elaenia at House

Y. B. Tanager

R. W. Swallow

B. Jay

S. B. Wren

W. B. Woodpecker

G. Catbird

B. G. Gnatcatcher - at House

T. Gnatcatcher

L. B. Gnatcatcher 2

~~T. Gnatcatcher~~

T. C. Gnatcatcher

L. B. Gnatcatcher

B. Gnatcatcher 1

KW 10

HW 10

B. W. Wren 3

W. W. Wren 3 + 4

MW 10

C. W. Wren

N. W. Wren 1

C. Yellowthroat

A. Redstart 10

Y. T. Wren

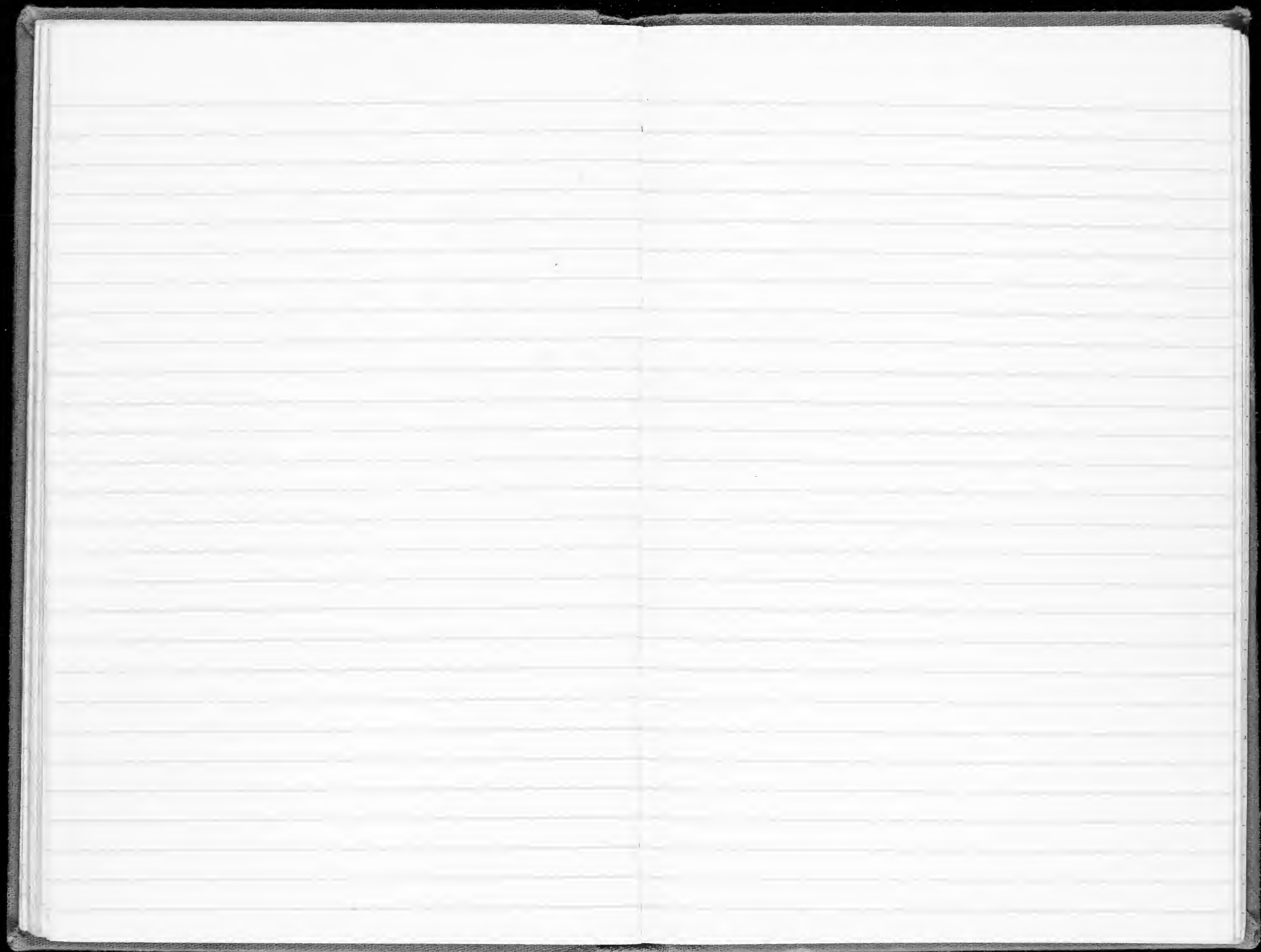
B. C. Wren

R. T. AT

R. C. AT

B. H. Sittler

etc.



What I have receipts for:

Room + Board:
Rockland
Frosty Lakes
Piney Bay
Hotel Crivates
Rio Limpio
Dura Leger
Hotel San Antonio
Car rental Jamaica
" Belize

What I don't have receipts for:

Gas \$300

Groceries

Restaurants (except Hotel Crivates)

Taxi

Airport taxes

Hotel El Centro - Belize City

~~Given 33000~~

120 days Per Diem

40

=

\$4800

900 car rental

\$5700

3800

~~2900~~

1900

2300

120 days

72

72

50

Owed \$400 plane tickets

\$3400

1600

1900

2600

~~1041 in Belize~~

\$3010 in travel checks

700

3710

I have

\$740 left -

July had \$150

\$900 + \$200

reimbursed

from our
account

\$1100

~~550~~

50-p

3010

700

3710

\$595 - CR
175 Don Weyer

\$123.00 Gas
51.00 Food
51.00 Hotel
5.00 Phone calls
10.00 Taxi

~~~~~  
1010.00

I will pay 2 hrs \$700.00

~  
\$10.00  
4.00  
7.00  
10.00

\$31.00 more

~  
\$1041.00 for trip to Belize

Car Rental = \$780 - 15%

- 105  
\$595 -

700  
315  
105

I paid 575

so I owe

\$25 US

I am refunded  
37.00  
18

\$7.00

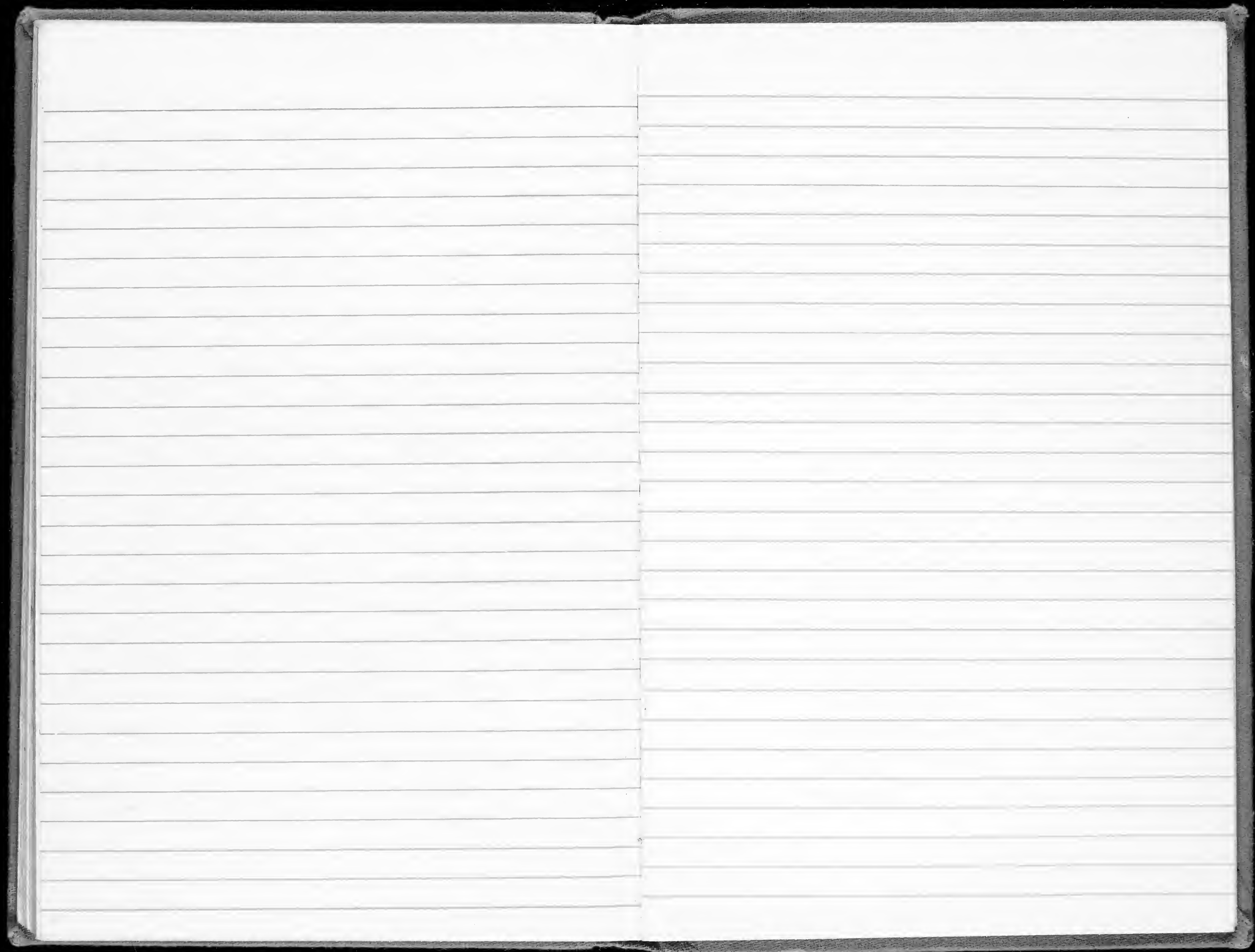
6w ~~15.00~~  
~~14.00~~  
22.00  
20.00-  
12.50-  
16.00-  
18.00-  
20.00-

Food 400  
300  
1.50  
6.00  
14.00  
20.00  
\$2.50 soap

Hotel: \$20 Belize  
\$30 San Antonio

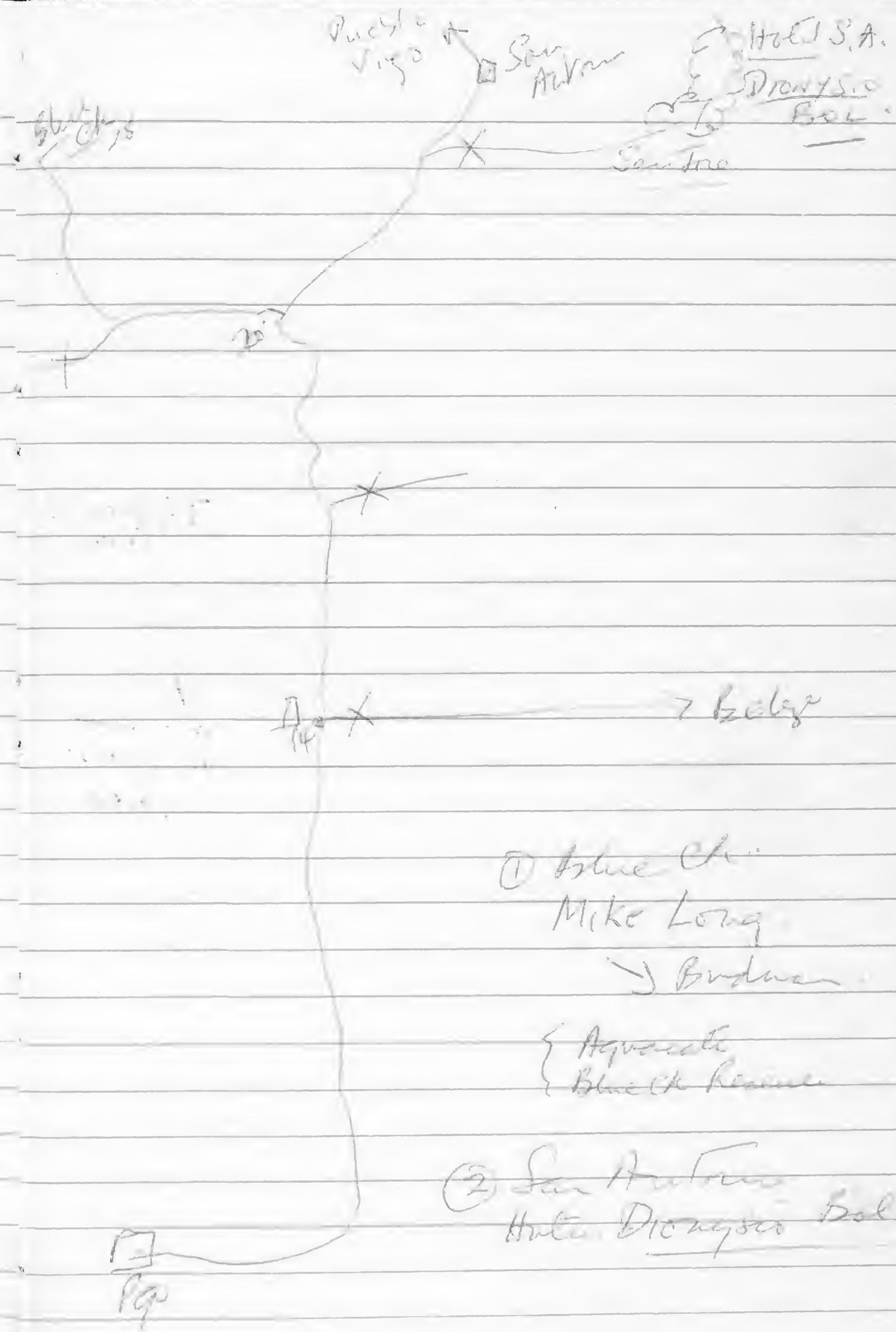
Taxi 10.00

Phone calls: 4.00  
1.00





Chale Calvez  
Punta Gorda



Dead leaf fringers

Mayland - non-

Jamaica - ~~molokai~~ B.M. vireo  
A.H. Warbler

Belize - Molokai - Long-billed warbler (Alm)  
T. Blue-winged Palms + Palm  
Ant tanager? T. Greenlet  
W.C. Woodwren (Palm)?

Spruce + Spot-breasted wren  
B.T. Foliole (rare)

←  
more common  
in wetter  
forest

More birds?

Back under thick forest

Dead leaf fringers

1. <sup>wet</sup> ~~hummingbird~~ forest edge Jamaica - D.R.  
Abundant

2. ~~Forest edge~~ ~~forest~~ ~~Belize~~ common  
B.C.I

3. ~~Forest edge~~ Belize - but  
top of Palm

4. Oak forest - Md - molokai  
interesting

5. @ Montrose Forest Jamaica, D.R. -  
Rare



64

Experiment 2  
live leaf = 22 Dead leaf  $N=70$

spiders 40% 15%

hymenoptera 27% ~~10~~

orthoptera 18% 79%

lepidoptera 0% 25%

Day composition - Humbird

live leaf  $N=34$

Dead leaf  $N=84$

spiders 75%

26%

Hemiptera 12

0

Orthoptera 3

60%

lepidoptera -

5%

etc 10%

10%

Bellevue Forest - 30 per

5,000 19 2 =  
~~00~~  
 134 .02 / 100

13 6 / 100

350:1  
~~350:1~~  
 36:1 7 hr night

5,000 44 .08 100  
 38.1 120:1

100 4 100  
 100 2

12  
 13  
 14  
 15  
 16  
 17  
 18  
 19  
 20  
 21  
 22  
 23  
 24  
 25  
 26  
 27  
 28  
 29  
 30  
 31  
 32  
 33  
 34  
 35  
 36  
 37  
 38  
 39  
 40  
 41  
 42  
 43  
 44  
 45  
 46  
 47  
 48  
 49  
 50  
 51  
 52  
 53  
 54  
 55  
 56  
 57  
 58  
 59  
 60  
 61  
 62  
 63  
 64  
 65  
 66  
 67  
 68  
 69  
 70  
 71  
 72  
 73  
 74  
 75  
 76  
 77  
 78  
 79  
 80  
 81  
 82  
 83  
 84  
 85  
 86  
 87  
 88  
 89  
 90  
 91  
 92  
 93  
 94  
 95  
 96  
 97  
 98  
 99  
 100

For trip South  
 Lunch Food - cheese

bread  
 Soda  
 Cakes  
 Candy

Map

corn flakes check Bank

Call Dennis Smith about car

Final receipts Food 2/22 North

\$1.28 10 oranges  
 45 bread  
 95 phone rental  
 50 female  
 17.50 gas - Denver  
 8.00 dinner  
 16 gas  
 1.50 laundry  
 1.50 40 cokes

\$6.00 Food 2/22 North  
 22 gas antip  
 2 food Beluza  
 20 gas Beluza  
 4 phone call  
 31 hotel  
 12.50 gas  
 2/23  
 2.75 lunch  
 \$10 - coral jewelry

SMT Dea Wey  
 David Rucklin

550



pu

it

X-

Line

2nd

E

X

1.5 ELW ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ 30

2.0 ELW ~~||||~~ ~~||||~~ 10 + ~~||||~~

3.0 ELW ~~||||~~ 10 ~~||||~~

550 t.c.  
 5214-581-024  
 8512-124-304  
 ↓  
 310

Check: Tail to Esperanza

Charles W. Light - By Falls - Jule

Henry Flower - Forestry

Argentina  
 Mocheco forest station  
 (San Antonio)

Martin Meadows Hills Bank

Mep in Belmopar.

to H. road.

Mephacti Mafridi:  
 turn Right towards

$$\begin{array}{r} 24512 \\ 24512 \\ \hline 49024 \\ 49024 \\ \hline 98048 \end{array}$$

$$\begin{array}{r} 24512 \\ 24512 \\ \hline 49024 \\ 49024 \\ \hline 98048 \end{array}$$

14



